



Model 7022/4000 Compensated Current Transformer

*Single & Multiple Ranges
Highest Permeability
Wide Measurement Range
Negligible Current Errors
Low Burden
Low Uncertainties*

General Description:

The Model 7022/4000 series of High Voltage Current Transformers was designed for the current input to MI's ALMS 4200 Loss Measurement Systems. For voltages below 100 kV see the Model 7021U/4000. This design meets the requirements of both CEI/IEC 44-1 and IEEE STD C57.12.00-2000. The bushing is filled to approximately 65 PSI absolute of SF6 and is fitted with a pressure indicator or with an optional pressure transducer with a 4-20 mA output for continuous monitoring. Connections to the primary winding of the current transformer are made via a copper bar, machined at both ends. Utilizing passive two stage compensated technology, errors of less than 10 ppm can be achieved at high voltages.

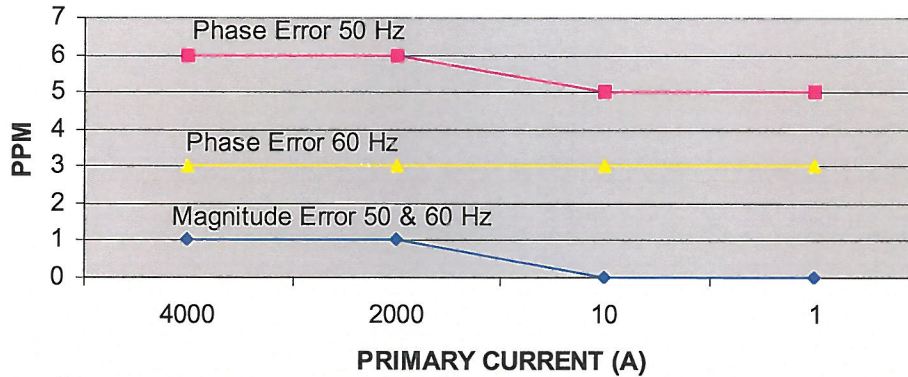
The main advantage of a two stage compensated CT is that the effective burden is 0 when feeding into another compensated CT such as the current input on the Model 2010A Wattmeter. As a result, the errors of the CT are effectively reduced to zero in both magnitude and phase. Lead length becomes unimportant and there is no further concern for any additional active components. If the 7022/4000 is connected to a wattmeter that has only a two wire input, the secondary and auxiliary leads must be connected together as close as possible to the input of the wattmeter. Typical errors for burdens at 1Ω are less than 100 ppm. For more accurate data on errors related to burdens above $100\text{ m}\Omega$ contact the factory.

The Model 7022/4000 is a four-wire single range passive-two-stage current transformer, which can be supplied to operate at primary currents of either 2000 or 4000 amperes and secondary currents of 1 and 2 amps respectively. The secondary and compensation windings are brought out through a tube and connector in the base of the structure for easy connection. All current transformers have 50% over range capabilities.

The Model 7022/4000 can also be used as a Range Extender for the Model 7010 series of Capacitance/Inductance Bridges for measuring losses in reactors.

Model 7022/4000

Typical Error Chart for 0 to 100 milli-ohm Burden
(Report # E01-003)



Specifications:

Nominal Ratio: 2000:1

Ratio Error < 10 ppm in magnitude and phase

Operating Voltage: 200 kV rms @ 50/60 Hz

Withstand Voltage: 275 kV rms @ 50/60 Hz

Impulse Peak: 650 kV

Partial Discharge: < 10 pC @ 200 kV

Operating Temperature: -5°C to 40°C

Humidity: Up to 95%, non-condensing

Environmental Conditions: Indoor Use Only

Dimensions:

Diameter 1m x 2.75m ht.

Weight:

330 kg

Distributed By:

How to Order:

Model: 7022/4000

Compensated Current Transformer

Data Subject to Change

Printed in Canada



Measurements International

118 Commerce Dr., PO Box 2359, Prescott, Canada K0E 1T0
Ph. 613.925.5934 • Fx. 613.925.1195 • North America: 1.800.324.4988